

Application No.: 09/616606

Docket No.: MIT-003RCE

REMARKS**Administrative Matters**

This amendment accompanies a Request for Continuing Examination. On January 16, 2004 the Examiner issued a Final Office Action (Paper No. 9) rejecting claims 1, 2 and 5-20. Applicant hereby amends claims 1-2, 5, 7-8 and 16. Upon entry of the current amendment, claims 1-2 and 5-20 will be presented for examination.

Rejection of Claims 1, 6, 7 and 9 as anticipated by Hsueh et al.

The Examiner rejects claims 1, 6, 7 and 9 as clearly anticipated by "Real-Time 3D Topography by Speckle Image Correlation" by Hsueh et al. ("Hsueh"). Claims 1 and 7 are independent and are hereby amended. Claim 6 depends from claim 1 and claim 9 depends from claim 7. For a claim to be anticipated by a reference, the reference must teach every aspect of the claimed invention, either explicitly or impliedly.

Independent claims 1 and 7 have been amended to include "a moveable aperture." In particular, independent claim 1 recites "an image acquisition subsystem [that] compris[es] a moveable aperture." Similarly, independent claim 7 now recites "an aperture element defining a moveable aperture."

Hsueh neither explicitly or impliedly teaches a moveable aperture. Instead the system described by Hsueh et al. relies on multiple cameras, not a moveable aperture, to acquire multiple images for correlation. See Hsueh at Section 2.1 ("the real-time 3D topography system consists of two CCD cameras.").

Since Hsueh does not explicitly or impliedly teach every element of independent claims 1 and 7, as amended, applicant respectfully submits that the rejection of claims 1, 6, 7, 9 as anticipated by Hsueh should be withdrawn.

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Rejection of claims 1, 5-7 and 9 as obvious over U.S. Patent**No. 4,294,544 ("Altschuler") in view of U.S. Patent No. 5,850,485 ("Hart")**

The Examiner rejects claims 1, 5-7 and 9 as obvious over Altschuler in view of Hart. Claims 1 and 7 are independent and are hereby amended. Claims 5 and 6 depend from claim 1. Claim 9 depends from claim 7. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the limitations recited by the rejected claims.

Neither Altschuler nor Hart teach or suggest an image acquisition subsystem that defines a moveable aperture. Altschuler relies on array of laser beams to illuminate a remote surface for topographic imaging rather than using a moveable aperture to acquire multiple images for correlation. Hart describes a method for image correlation once multiple images are acquired.

Since the combination of Altschuler and Hart do not teach or suggest a system having a moveable aperture, as recited by independent claims 1 and 7, as amended, Applicant respectfully submits that the rejection of claims 1, 5-7 and 9 as obvious should be withdrawn.

Rejection of claims 2, 8 and 10-20 as obvious over Altschuler in**view of Hart and further in view of U.S. Patent No. 6,278,847 ("Gharib")**

The Examiner rejects claims 2, 8 and 10-20 as obvious over Altschuler in view of Hart and further in view of Gharib. Claim 2 depends from amended independent claim 1. Claim 8 depends from amended independent claim 7. Claims 10 and 16 are independent claims and claim 16 is hereby amended. As discussed above in connection with the rejection of claims 1 and 7 as obvious over Altschuler in view of Hart, neither Altschuler or Hart teach or suggest an imaging system having a moveable aperture as recited by amended independent claims 1 and 7. Similarly, independent claims 10 and 16 recite a rotating aperture element. The arguments made above with respect Altschuler and Hart apply with equal force to claims 10 and 16 and are repeated again as if set forth in full.

Gharib does not cure the deficiencies in Altschuler and Hart. Gharib describes an aperture coded camera for 3D imaging. However, Gharib does not describe a system having a moveable aperture. Instead, Gharib describes a system that relies on multiple apertures to provide multiple exposures of the imaged object. See Gharib, col. 3 lines 19-22. Nor does the

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section of Gharib cited by the Examiner disclose an imaging system having a moveable aperture. Column 3 line 56 through column 4, line 7, Gharib describes a system having multiple apertures, each of which can be occluded by a selective blocking means.

Since neither Altschuler, Hart, or Gharib teach or suggest an imaging system that includes a moveable aperture, Applicants respectfully submit that the rejection of claim 2 which depends from independent claim 1, claim 8 which depends from independent claim 7, and claims 10-20 should be withdrawn.

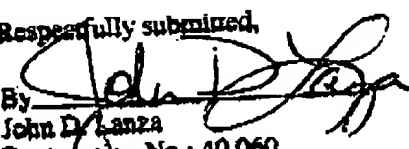
CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. MIT-003RCE from which the undersigned is authorized to draw.

Dated: April 16, 2004

Respectfully submitted,

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